

are given in Table VII, which shows the number of stations from which meteorological reports were received, and the number of such stations reporting thunderstorms (T) and auroras (A) in each State and on each day of the month, respectively.

Thunderstorms.—Reports of 708 thunderstorms were received during the current month as against 492 in 1898 and 426 during the preceding month.

The dates on which the number of reports of thunderstorms for the whole country were most numerous were: 8d, 190; 25th, 108; 26th, 102.

Reports were most numerous from: Tennessee, 78; North Carolina, 68; Florida, 63; Missouri, 46.

Auroras.—The evenings on which bright moonlight must

have interfered with observations of faint auroras are assumed to be the four preceding and following the date of full moon, viz, 20th to 28th.

The greatest number of reports were received for the following dates: 11th, 85; 12th, 82; 13th, 8.

Reports were most numerous from: North Dakota, 23; Minnesota, 21; Iowa, 16; South Dakota, 15; Michigan, 14.

In Canada.—Auroras were reported as follows: Charlotte-town, 11th; Quebec, 11th, 12th, 27th; Montreal, 14th; Ottawa, White River, Swift Current, and Banff, 12th; Kingston, 11th, 23d; Port Arthur, 12th, 13th; Minnedosa, 9th, 10th, 12th; Medicine Hat, 16th; Prince Albert, 28th; Battleford, 3d, 10th, 11th.

No thunderstorms were reported.

CLIMATE AND CROP SERVICE.

By JAMES BERRY, Chief of Climate and Crop Service Division.

The following extracts relating to the general weather conditions in the several States and Territories are taken from the monthly reports of the respective sections of the Climate and Crop Service. The name of the section director is given after each summary.

Rainfall is expressed in inches.

Alabama.—The mean temperature was 40.0°, or 7.1° below normal; the highest was 80°, at Healing Springs on the 4th and at Alco on the 23d, and the lowest, 17° below zero, at Valleyhead on the 12th. The average precipitation was 6.61, or 0.66 above normal; the greatest monthly amount, 9.39, occurred at Clanton, and the least, 1.67, at Daphne. The month was the coldest on record. Several persons were frozen to death; stock suffered very much; in some counties cows, hogs, and goats froze to death, and poultry froze on the roost; large numbers of game birds perished, and swift-running streams, never before known to freeze, were covered with ice; the ice on ponds in middle counties was thick enough for skating on the 13th and 14th, while at Montgomery sleighing was indulged in for three days.—*F. P. Chaffee.*

Arizona.—The mean temperature was 46.8°, or 1.0° below normal; the highest was 90°, at Parker on the 21st and 23d, and the lowest, 24° below zero, at Fort Defiance on the 7th. The average precipitation was 0.45, or 0.57 below normal; the greatest monthly amount, 2.58, occurred at Flagstaff, while none fell at a number of stations.—*W. G. Burns.*

Arkansas.—The mean temperature was 31.8°, or 11.9° below normal, and was the coldest February on record; the highest was 75°, at Conway on the 28th, and the lowest, 25° below zero, at Corning and Winslow on the 12th and at Keesees Ferry on the 13th. The average precipitation was 2.18, or 1.72 below normal; the greatest monthly amount, 4.15, occurred at Brinkley, and the least, 0.63, at Texarkana.—*E. B. Richards.*

California.—The mean temperature for the State, obtained by weighting the reports from 280 stations, so that equal areas have about equal weight, was 48.5°, or 0.1° below normal; the highest recorded was 100°, at Tres Pinos, San Benito County, on the 19th, and the lowest, 30° below zero, at Boca, Nevada County, on the 6th. The average precipitation for the State, as determined by the records of 299 stations, was 0.45; the deficiency, as indicated by reports from 168 stations which have normals, was 2.88; the greatest monthly precipitation was 10.95, at Crescent City, Del Norte County, while none fell at many stations.—*W. H. Hammon.*

Colorado.—The mean temperature was 18.2°, or 8.8° below normal; the highest was 68°, at Minneapolis on the 27th, and the lowest, 45° below zero, at Greeley on the 12th. The average precipitation was 0.98, or normal; the greatest monthly amount, 5.08, occurred at Breckenridge, and the least, 0.06, at Garnett.—*F. H. Brandenburg.*

Georgia.—The mean temperature was 43.6°, or 4.2° below normal; the highest was 82°, at Maury on the 22d, and the lowest, 12° below zero, at Diamond and Tallapoosa on the 13th. The average precipitation was 7.47, or 2.40 above normal; the greatest monthly amount, 10.32, occurred at Diamond, and the least, 1.90, at Gunde. On the 12th and 13th the State was under the influence of the most intensely cold weather ever experienced in this section, so far as available records show. The extreme cold did immense damage to crops and caused untold suffering. Traffic was seriously interrupted and many cattle perished. Reports from several hundred correspondents show that the peach crop was totally killed in many sections, and more or less damaged in all sections of the State. Many orchards of young trees were killed outright and will have to be replanted. The oat crop was

almost entirely killed in many counties, but wheat fared better, and in many sections is still very promising. The mantle of snow which covered the fields was a great protection to this crop, and it is only where the snow was blown off that any material damage was done. The damage to the fruit interests of the State means the loss of several millions of dollars to the fruit growers. It is thought apples are badly injured. Peaches on high ground suffered least. Orchards in the northern section of the State were not so far advanced and, consequently, suffered less than in the central and southern counties.—*J. B. Marbury.*

Illinois.—The mean temperature was 19.6°, or 8.3° below normal; the highest was 69°, at Plumhill on the 20th, and the lowest, 29° below zero, at Morrisonville on the 12th. The average precipitation was 2.08, or 0.21 below normal.—*O. E. Linney.*

Indiana.—The mean temperature was 21.9°, or 8.7° below normal; the highest was 67°, at Bedford on the 26th, and the lowest, 29° below zero, at Cambridge City on the 13th. The average precipitation was 2.25, or 0.48 below normal; the greatest monthly amount, 4.20, occurred at Vevay, and the least, 0.50, at Valparaiso.—*C. F. R. Wappenhans.*

Iowa.—The mean temperature was 12.2°, or about 9.0° below normal; the highest was 75°, at Mount Pleasant on the 20th, and the lowest, 40° below zero, at Sibley on the 9th. The average precipitation was 0.89, or 0.17 below normal; the greatest monthly amount, 4.32, occurred at Ridgeway, and the least, 0.12, at Toledo.—*J. R. Sage, Director; G. M. Chappel, Assistant.*

Kentucky.—The mean temperature was 26.2°, or 9.6° below normal; the highest was 71°, at Paducah and Russellville on the 20th, and the lowest, 33° below zero, at Sandyhook on the 11th. The average precipitation was 3.96, or 0.34 above normal; the greatest monthly amount, 8.34, occurred at Williamsburg, and the least, 1.84, at Louisville. The extremely cold weather during the early part of the month caused much damage to fruit.—*H. B. Hersey.*

Louisiana.—The mean temperature was 44.3°, or 9.2° below normal; the highest was 85°, at Oakridge on the 3d, and the lowest, 16° below zero, at Minden on the 13th. The average precipitation was 3.42, or 1.47 below normal; the greatest monthly amount, 6.55, occurred at Lawrence, and the least, 1.47, at the Northern Louisiana Experiment Station, Calhoun. During the cold wave of the 12th and 13th all previous records of cold weather in Louisiana were broken. On the morning of the 17th large blocks of ice appeared in the Mississippi River at New Orleans, passing in a steady stream southward at the rate of about five miles per hour, and reached the Gulf on the 19th. It is impossible to estimate the direct loss resulting from the freeze, but it is thought that it exceeds several million dollars, while the direct loss is even greater.—*A. G. McAdie.*

Maryland and Delaware.—The mean temperature was 26.6°, or 6.6° below normal; the highest was 67°, at Cumberland, and Frostburg, Md., on the 21st, and the lowest, 26° below zero, at Sunnyside, Md., on the 10th. The average precipitation was 5.51, or 1.37 above normal; the greatest monthly amount, 8.85, occurred at Coleman, Md., and the least, 2.07, at Boettcherville, Md.—*F. J. Wals.*

Michigan.—The mean temperature was 14.1°, or 6.9° below normal; the highest was 62°, at Clinton and Grape on the 26th, and the lowest, 49° below zero, at Humboldt on the 7th. The average precipitation was 1.44, or 0.43 below normal; the greatest monthly amount, 3.18, occurred at Olivet, and the least, 0.39, at Traverse City. The month was remarkable for excessive cold, it being the coldest on record. Lake Michigan was almost frozen over on the 15th. Much fruit was destroyed and considerable game, especially quail, partridge and ducks, perished on account of the extreme cold.—*C. F. Schneider.*

Minnesota.—The mean temperature was 4.5°, or about 8.0° below nor-

mal; the highest was 55°, at Pleasant Mounds, Tower, and Luverne on the 19th, and at Winnebago City on the 20th, and the lowest, 59° below zero, at Leach Lake Dam on the 9th. The average precipitation was 0.78, or about normal; the greatest monthly amount, 1.80, occurred at Rolling Green and Tower, and the least, 0.05, at Crookston.—*T. S. Outram.*

Mississippi.—The mean temperature was 36.3°, or about 10.0° below normal; the highest was 80°, at Leakesville on the 2d, and the lowest, 18° below zero, at French Camp on the 13th. The average precipitation was 4.15, or 1.35 below normal; the greatest monthly amount, 8.99, occurred at Agricultural College, and the least, 1.60, at Burke. The cold weather of the 11th, 12th, and 13th caused great damage to fruit and fruit trees; orange, fig, and persimmon trees, except possibly the Satsuma oranges, were killed to the ground. Oats were killed to the ground but are coming up again.—*W. T. Blythe.*

Missouri.—The mean temperature was 20.4°, or 11.9° below normal; the highest was 72°, at Zeitonia on the 19th and at Marblehill on the 20th, and the lowest, 32° below zero, at Birchtree and Zeitonia on the 13th. The month was the coldest February on record, and during the first two weeks of the month the temperature averaged about 25° below normal. The average precipitation was 2.17, or about normal; the greatest monthly amount, 6.84, occurred at New Madrid, and the least, 0.71, at Unionville. As a result of the extremely low temperatures of the first half of the month peach buds were very nearly all killed and a large per cent of the trees badly frozen, many being killed to the snow line. Pears, plums, and apricots also suffered severely, a large portion of the buds being killed and, in some instances, the wood badly damaged. The hardier varieties of cherries generally escaped, but sweet cherries were killed to a considerable extent. Apples were reported badly damaged in some localities but it is believed that, as a rule, they were not seriously injured. The hardy varieties of grapes are generally safe. In most of the east-central, southeastern and south-central counties winter wheat was well protected by snow during the severe cold weather and was not seriously injured, except in localities where some of the late sown was killed, but generally throughout the northern and western sections the ground was nearly or quite bare and much of the crop was greatly damaged. Clover was also badly killed in some sections, especially where closely pastured, but in many counties was reported in good condition at the close of the month.—*A. E. Hackett.*

Montana.—The mean temperature was 10.6°, or 11.4° below normal; the highest was 60°, at Utica on the 13th, and the lowest, 61° below zero, at Fort Logan on the 11th. The average precipitation was 0.87, or 0.29 above normal; the greatest monthly amount, 3.85, occurred at Darby, and the least, trace, at Billings.—*E. J. Glass.*

Nebraska.—The mean temperature was 12.1°, or 12.2° below normal, and the coldest February on record; the highest was 74°, at Tecumseh on the 20th, and the lowest, 47° below zero, at Camp Clarke on the 12th. The average precipitation was 0.61, or 0.06 below normal; the greatest monthly amount, 1.60, occurred at Superior, and the least, trace, at Haigler and Loup.—*G. A. Loveland.*

Nevada.—The mean temperature was 33.3°, or 1.1° above normal; the highest was 73°, at Candelaria on the 19th, and the lowest, 27° below zero, at Wells on the 5th. The average precipitation was 0.55, or 0.45 below normal; the greatest monthly amount, 2.47, occurred at Clover Valley, while none fell at Las Vegas.—*J. H. Smith.*

New England.—The mean temperature was 21.1°, or 2.0° below normal; the highest was 60°, at Somerset, Mass., on the 21st, and the lowest, 30° below zero, at Flagstaff, Me., on the 9th, and at Woodstock, Vt., on the 12th. The average precipitation was 3.74, or 0.30 above normal; the greatest monthly amount, 6.91, occurred at New London, Conn., and the least, 1.24, at Burlington, Vt. The month was rough and stormy; the precipitation of the first half was all in the form of snow, and of the second half rain.—*J. W. Smith.*

New Jersey.—The mean temperature was 25.8°, or 5.3° below normal; the highest was 60°, at Bridgeton and Paterson on the 22d, and the lowest, 17° below zero, at Deckertown on the 10th and at Rivervale on the 15th. The average precipitation was 6.06, or 2.00 above normal; the greatest monthly amount, 8.77, occurred at Staffordville, and the least, 3.78, at Atlantic City. The cold wave of February 9-11 will go on record as the most severe during this century, certainly during the present generation; the records covering a period of fifty years show nothing to compare with it. In some portions of the State the mean temperature for the 11th was from 1.5° to 6° below zero. The minimum was below zero at all stations on the 10th and 11th, and ranged from 3° below in the extreme southern, to 17° below in the northern portions of the State. The extreme cold was followed by one of the most severe snowstorms on record. Snow began to fall on the evening of the 11th, and continued until early in the morning of the 14th. During this period it fell to the depth of from 30 inches in the southern to 44 inches in the northern portions. All railroad travel was suspended by the 13th, and country roads were impassable for several days, the drifts being from 3 to 8 feet high in many places.

An extract from a letter received from Mr. Thomas J. Beans, Voluntary Observer, Moorestown, N. J., will prove of interest:

"I was nine years old when the snow of 1836 fell. From that time throughout my residence in Pennsylvania it was always spoken of as

'the big snow.' Enquiring of many of the old people in New Jersey, they say it was called here, 'the great snow.' At my father's home I remember the sheep were covered out of sight, and after a long search were found by holes in the snow made by their breath. The young timber was bent over in the woods so that many trees kept their bent form after they had attained size years after. A rain and freeze covered the snow with ice, so that skating over its surface was the usual way for going to school. My father hauled his hay to Philadelphia, 18 miles, on a hay body with sled runners. This corresponds with what I have gathered from old people in Jersey."—*E. W. McGann.*

New Mexico.—The mean temperature was 33.3°, or 2.7° below normal; the highest was 79°, at Eddy on the 21st and 22d and at Rincon on the 24th, and the lowest, 27° below zero, at Winsors on the 7th. The average precipitation was 0.42, or 0.25 below normal; the greatest monthly amount, 2.20, occurred at Winsors, while at Aztec and Socorro there was no precipitation, and only a trace at Bernalillo, Deming, Hillsboro, and Los Lunas.—*R. M. Hardinge.*

New York.—The mean temperature was 20.5°, or 3.5° below normal; the highest was 58°, at Elmira on the 20th, and the lowest, 31° below zero, at Number Four on the 11th. The average precipitation was 2.47, or 0.19 below normal; the greatest monthly amount, 6.20, occurred at Kings Station, and the least, 0.65, at Mount Morris.—*R. G. Allen.*

North Carolina.—The mean temperature was 36.5°, or 6.8° below normal; the highest was 77°, at Fayetteville on the 4th, and the lowest, 19° below zero, at Highlands on the 13th. The average precipitation was 7.95, or 3.61 above normal; the greatest monthly amount, 13.28, occurred at Highlands, and the least, 3.94, at Wilmington. Farm work was entirely suspended throughout the month. The damage by the freeze to the truck crops in the east is not thought to have been very great.—*C. F. von Herrmann.*

North Dakota.—The mean temperature was 3.0°, or 4.7° below normal; the highest was 60°, at Berthold Agency on the 16th, and the lowest, 48° below zero, at McKinney on the 8th. The average precipitation was 0.23, or 0.26 below normal; the greatest monthly amount, 0.52, occurred at Medora, and the least, trace, at Jamestown, Larimore, Melville, and Steele.—*B. H. Bronson.*

Ohio.—The mean temperature was 21.6°, or 6.8° below normal; the highest was 67°, at Hanging Rock on the 20th, and the lowest, 39° below zero, at Milligan on the 10th. The lowest temperature ever recorded was experienced in many towns, and water pipes were badly frozen in all sections of the State. The average precipitation was 2.11, or 0.76 below normal; the greatest monthly amount, 4.52, occurred at Wauseon, and the least, 0.89, at Killbuck.—*J. Warren Smith.*

Oregon.—The mean temperature was 34.8°, or 1.8° below normal; the highest was 74°, at Winona on the 19th, and the lowest, 27° below zero, at Silverlake on the 4th. The average precipitation was 5.91, or 1.24 above normal; the greatest monthly amount, 22.22, occurred at Government Camp, and the least, 0.01, at P. Ranch.—*B. S. Pague.*

Pennsylvania.—The mean temperature was 22.7°, or 5.9° below normal; the highest was 67°, at Huntingdon on the 21st, and the lowest, 39° below zero, at Lawrenceville on the 11th. The average precipitation was 4.05, or 1.10 above normal; the greatest monthly amount, 10.22, occurred at Coatesville, and the least, 0.98, at Shinglehouse. On the 11th all previous records of low temperatures were broken in nearly all sections of the State, and during the latter part of the day a severe snowstorm, accompanied by high winds, set in, and by the morning of the 12th railroads and trolleys were so badly blocked that transportation of all kinds was almost suspended. The storm continued with unabated energy throughout the 12th and 13th, during which time traffic was at a standstill. The snow was piled up in high drifts and cities and towns were completely cut off from outside communication, except by wire, and the streets were almost impassable to pedestrians. There being no heavy lodgment of ice or snow on the telegraph lines, telegraph and telephone service was but little interrupted. Many employees were unable to reach their places of business in the cities, and in the coal regions mines were shut down because the miners were snowbound in their homes.—*T. P. Townsend.*

South Carolina.—The mean temperature was 43.0°, or 7.0° below normal; the highest was 80°, at St. Matthews on the 4th, and at Summer-ville on the 5th, and the lowest, 11° below zero, at Santuc and Shaws Forks on the 14th. The average precipitation was 6.98, or 3.32 above normal; the greatest monthly amount, 12.30, occurred at Trenton, and the least, 3.23, at Allendale. The cold wave of the 11-14th exceeded in severity, and gave lower temperatures than any before known in South Carolina, with authenticated records. Tradition, indeed, marks the month of February, 1835, as equally cold, but persistent research and inquiry has failed to bring to light any thermometer readings for that month, unless an article in a daily newspaper correspondence from Summerville, S. C., in which the writer stated that he heard that in 1835 the thermometer fell to 2° above, and from another source that it fell to zero, can be substantiated. Over the western portions of the State the cold period of February 6 and 7, 1835, held the first place in cold weather traditions, but no thermometer readings whatever have been discovered covering those dates.—*J. W. Bauer.*

South Dakota.—The mean temperature was 7.0°, or about 9.0° below normal; the highest was 65°, at Yankton on the 19th, and the lowest, 47° below zero, at Ladelle on the 9th. The average precipitation was

0.36, or 0.56 below normal; the greatest monthly amount, 1.11, occurred at Flandreau, and the least, trace, at Alexandria, Mellette, and Watertown.—*S. W. Glenn.*

Tennessee.—The mean temperature was 30.2°, or about 10.0° below normal; the highest was 76°, at Madison on the 20th, and the lowest, 30° below zero, at Erasmus on the 13th. The average precipitation was 5.83, or about 0.75 above normal; the greatest monthly amount, 14.15, occurred at Oakhill, and the least, 2.70, at Union City.—*H. C. Bate.*

Texas.—The mean temperature was 11.1° below normal; there was a general deficiency, ranging from 8° to 15°, with the greatest in the interior; the highest was 99°, at Fort Ringgold on the 3d, and the lowest, 23° below zero, at Tulia on the 12th. The average precipitation, determined by comparison of 50 stations, distributed throughout the State, was 1.10 below the normal. There was only a slight deficiency over the east coast district and the extreme western portion of west Texas, while the deficit was general in other sections and amounted to more than 1 inch in most places, with the greatest, 2.61, at Longview. The greatest monthly amount, 3.58, occurred at Brazoria, while none fell at several stations in the western portion. The month was very unfavorable for farming operations. The severe cold spell at the opening of the second decade stopped farm work in all sections. Drought is becoming very severe in places over west and north portions, placing farmers considerably behind with their work, especially plowing and making preparations for spring crops.—*I. M. Cline.*

Utah.—The mean temperature was 28.8°; the highest was 77°, at St. George on the 19th, and the lowest, 50° below zero, at Woodruff on the 6th. The average precipitation was 1.73; the greatest monthly amount,

5.85, occurred at Heber, and the least, trace, at Giles and St. George.—*L. H. Murdoch.*

Virginia.—The mean temperature was 30.2°, or 8.1° below normal; the highest was 80°, at Westpoint on the 4th, and the lowest, 29° below zero, at Monterey on the 10th. The average precipitation was 5.50, or 1.99 above normal; the greatest monthly amount, 8.18, occurred at Hampton, and the least, 2.65, at Monterey. The heavy fall of snow which attended the cold period of 10–16th afforded protection to winter crops and no winter killing has been reported.—*E. A. Evans.*

Washington.—The mean temperature was 32.5°, or 4.0° below normal; the highest was 63°, at Centerville on the 14th, at Kennewick on the 17th and at Fort Simcoe on the 18th, and the lowest, 36° below zero, at Usk on the 4th. The average precipitation was 5.43, or 1.30 above normal; the greatest monthly amount, 20.98, occurred at Clearwater, and the least, 0.31, at Sunnyside.—*G. N. Salisbury.*

Wisconsin.—The mean temperature was 9.3°, or 7.5 below normal; the highest was 58°, at Butternut on the 21st, and the lowest, 50° below zero, at Easton on the 10th. The average precipitation was 0.95, or 0.09 above normal; the greatest monthly amount, 2.51, occurred at Dodgeville, and the least, trace, at Racine and Westbend.—*W. M. Wilson.*

Wyoming.—The mean temperature was 11.2°, or 11.2 below normal; the highest was 55°, at several stations on different dates, and the lowest was 51° below zero, at Lowell on the 4th and at Basin on the 5th. The average precipitation was 1.78, or 1.03 above normal; the greatest monthly amount, 5.90, occurred at Centennial, and the least, 0.13, at Alcova. As a whole, the month was one of the coldest and stormiest on record in Wyoming.—*W. S. Palmer.*

SPECIAL CONTRIBUTIONS.

SNOW TEMPERATURES.

By E. B. CALVERT and W. F. R. PHILLIPS.

The snowstorms of February 5–8 and 11–13, 1899, were, for both the depth of the snowfall and the subsequent cold weather, most unusual for the region in which Washington, D. C., is situated. Following these storms the writers made some thermometric observations of the temperature of the snow at different depths from the surface. From the practical value that such observations appear to possess, we think that the series made by us is suggestive and of sufficient importance to publish.

The observations were made in snow that fell on an open plat of sod covered ground on the north side of the Weather Bureau building. Two classes of observations were made. One in snow on which the sun had shone for some hours and the other in snow that had been shaded for some time by the building.

Snow began to fall on the morning of February 5 and continued at intervals till the morning of the 8th. At the end of the storm the snow was about 13 inches deep. At the beginning of the snow the temperature of the air was 32°, and it gradually fell to 25° at the end of the storm. The tem-

perature continued to fall till on the morning of the 11th it was 15° below zero, the lowest temperature ever recorded for Washington, D. C. The second storm began during the afternoon of the 11th and continued into the night of the 13th. The temperature of the air during this storm ranged from 15° below zero to 11° above. The snow was considerably drifted by the high winds that prevailed during its fall. On the morning of the 14th the snow measured from 25 to 30 inches deep in level places in front of the Weather Bureau building.

The first set of snow temperature observations was made on the afternoon of February 9 in snow 10 inches deep. At this time the atmospheric temperature was 8°. A thermometer lying immediately on the surface of the snow indicated, in the shade, a temperature of 3°, and, in the sun, a temperature of 9°. The results of the other readings made in the shade were as follows, viz: Three inches below the surface of the snow (or 7 inches from the surface of the ground) the temperature was 16°; 6 inches below the surface (4 inches from the ground) it was 20°; and 10 inches below the surface, the bulb of the thermometer touching the ground, the temperature was 31°.

On the following morning, with an air temperature of 6°

February, 1899.

Distance of thermometer bulb from surface of—		9th.		10th.				11th.				14th.			
		3 p. m.		10 a. m.		3 p. m.		10 a. m.		3 p. m.		10 a. m.		3 p. m.	
Snow.	Ground.	Shade.	Sun.	Shade.	Sun.	Shade.	Sun.	Shade.	Sun.	Shade.	Sun.	Shade.	Sun.	Shade.	Sun.
On surface	10 inches above..	8.0	9.0	— 7.5	— 7.5	— 8.0	5.5	8.0	15.5	11.0	14.0	8.0	.....	.....	.....
Just below	9–10 inches above .....	.....	.....	.....	— 5.5	— 4.0	3.5	1.0	14.5	9.5	15.5	8.0	.....	.....	.....
3 inches below ..	7 inches above	18.0	15.0	8.5	5.5	5.0	11.0	5.0	11.0	15.0	15.0	6.5	.....	.....	.....
6 inches below ..	4 inches above	20.0	20.0	14.0	15.0	15.0	16.5	16.0	20.0	18.5	20.0	9.5	.....	.....	.....
6 inches below ..	On ground .....	.....	31.5	.....	27.0	.....	28.0	.....	.....	.....	.....	.....	.....	.....	.....
9 inches below ..	1 inch above .....	.....	27.0	20.0	28.0	28.0	29.0	.....	.....	18.5	27.0	9.5	.....	.....	.....
10 inches below ..	On ground	31.0	31.0	31.0	29.5	31.5	30.0	27.0	22.0	31.0	29.0	.....	.....	.....	.....
23 inches below ..	On ground .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	30.5	.....	.....	31.5
19 inches below ..	6 inches above .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	25.0	.....	.....	24.5
16 inches below ..	9 inches above .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21.0	.....	.....	23.5
13 inches below ..	12 inches above .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.0	.....	.....	18.0
7 inches below ..	18 inches above .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12.0	.....	.....	11.5
On surface	25 inches above .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.0	.....	.....	34.0
Temp. of air 65 feet above snow .....	.....	8.0	.....	— 6.0	.....	3.0	.....	— 1.0	.....	12.0	.....	13.0	.....	22.0	.....
Temp. of air 1 foot above snow .....	.....	8.0	.....	— 5.0	.....	2.0	.....	1.5	.....	11.0	.....	14.5	.....	.....	.....
Velocity of wind, in miles per hour ..	.....	22.0	.....	14.0	.....	12.0	.....	6.0	.....	4.0	.....	17.0	.....	11.0	.....